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# THE ECONOMIC IMPACT OF BRAIDY INDUSTRIES ON OHIO AND WEST VIRGINIA

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This report supplements my previous study which focused on the economic impact of Braidy Industries on Eastern Kentucky and the Commonwealth of Kentucky. In this supplement, I focus on four counties in Ohio and West Virginia immediately adjacent to Boyd County and Ashland, Kentucky. The economic impacts and employment estimates provided here are in addition to those estimated for Eastern Kentucky and the Commonwealth of Kentucky.

The metropolitan area in which Braidy's Ashland development is located spans three states: Kentucky, Ohio and West Virginia. The region is economically interdependent and thousands of individuals cross state lines and the Ohio River every day to go to work.

The United States Census estimates that on a daily basis, an average of 3,404 individuals travel from Lawrence, County, Ohio to jobs in Boyd County, Kentucky, while 858 individuals travel from Scioto County, Ohio daily to their jobs in Boyd County. In the case of West Virginia, two counties (Cabell and Wayne) supply nearly all the workers who travel from West Virginia to Boyd County, Kentucky. The Census estimates that 965 workers commute from Cabell County, West Virginia to Boyd County for their work and that 737 workers daily travel from Wayne County in West Virginia to Boyd County for their jobs.<sup>2</sup>

Thus, it should not come as a surprise that a significant proportion of Braidy Industries employees are residents of Ohio and West Virginia and that Braidy's economic activities already are having major impact on those two states. This is what one would expect in a metropolitan area that overlaps portions of three states.

## **BACKGROUND**

An important reason why the current economic impact of Braidy Industries on the region is so significant is that the area has not fared as well as the rest of the nation in recent decades. In my April report, I outlined these facts for Eastern Kentucky in my previous report and briefly will do the same here for the two adjacent counties in Ohio (Lawrence and Scioto) and the two adjacent counties in West Virginia (Cabell and Wayne). Braidy Industries, however, is changing these numbers.

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<sup>&</sup>lt;sup>1</sup> James V. Koch, The Economic Impact of Braidy Industries (April 2019, Old Dominion University).

<sup>&</sup>lt;sup>2</sup> These data come from the United States Census, Table 1, Residence County to Workplace County Commuting Flows for the United States and Puerto Rico Sorted by Residence Geography, 5-Year ACS, 2022-2015," <a href="https://www.census.gov">www.census.gov</a>

Table 1, however, records how these four these counties stack up with the rest of the United States in four important categories: population growth, net domestic migration, employment changes and average weekly wages. It is apparent that these four counties trail the typical county in the United States with respect to these metrics.

It is precisely here, however, that Braidy will make a difference. First, its activities and their ripple effects will add jobs. People stay in, or go to, areas that have jobs. I show this in a section below.

Second, Braidy pays above average wages. Figure 1 reveals that Braidy's average weekly wage is greater than the average wage paid workers in either Ohio or West Virginia, and 20 to 25 percent above regional county averages.

Table 1

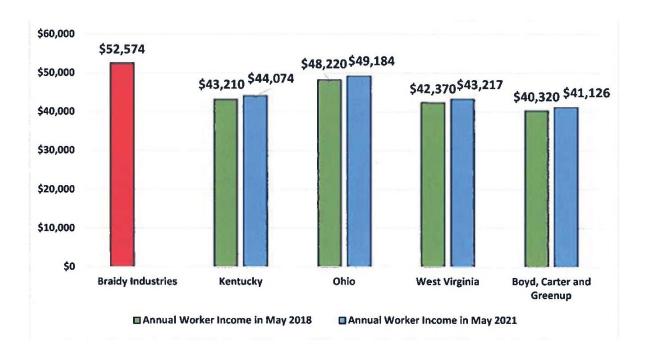
The Performance of Lawrence, Scioto, Cabell and Wayne Counties with Respect to Four Important Socioeconomic Variables 2010

Location	Population Change, 2010-18	Net Domestic Migration, 2010-18	Change in Covered Employment, 2010-18	Average Weekly Wages, 2018
Ohio			-	
Lawrence County	-4.13%	-1,781	1.02%	\$675
Scioto County	-5.02%	-3,611	.17%	\$738
West Virginia				
Cabell County	-3.19%	-2,885	1.54%	\$830
Wayne County	-6.01%	-1,821	-9.69%	\$846
J.S. Average	6.0%	N.A.	8.36%	\$1,152

Sources: U.S. Census Quick Facts for population; Bureau of Labor Statistics Quarterly Census of Employment and Wages for employment and the Bureau of Labor Statistics for average weekly wages.

Figure 1

Comparing the Average Annual Wage of Braidy Employees to Selected Counties, Kentucky, Ohio and West Virginia



#### ECONOMIC IMPACT ANALYSIS RESULTS

Table 1 summarizes the results of the economic impact study for two counties in Ohio (Lawrence and Scioto) and two counties in West Virginia (Cabell and Wayne).<sup>3</sup> No other counties come close to these counties in terms of their economic connections to Braidy.

The estimates reported in Table 1 include: (1) the effect of Braidy's direct spending; (2) its impact of Braidy's presence upon its suppliers; and, (3) the economic ripple effects that occur when Braidy's employees and suppliers spend money in the region.

If we look only at these four counties, then we can make the following generalizations:

<sup>&</sup>lt;sup>3</sup> As was the case with the larger study, this supplementary study relied upon the U.S. Department of Commerce's RIMS-II economic impact estimating model to generate estimates. In essence, RIMS-II is an input-output matrix that enables one to see how all parts of the U.S. economy are related to each other. www.bea.gov/resources/methodologies/RIMSII-user-guide.

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- Whether measured by output, earnings, or employment, Braidy's economic impact on West Virginia is larger than its comparable economic impact on Ohio.
- Braidy's estimated impact on the value of output in Ohio is \$238.34 million, while the comparable number for West Virginia is \$238.34 million. Note, however, that while these economic impact numbers include only one year of production, they reflect construction expenditures that are spread over several years.
- Braidy's economic impact on West Virginia compared to that on Ohio is
  proportionately the largest when one looks at the value of output produced
  because of the places its customers and suppliers are located. West Virginia will
  enjoy 61 percent of the non-Kentucky economic output impact of Braidy, while
  Ohio will experience only 39 percent.
- The picture changes, however, when we look at employment. West Virginia's employment advantage over Ohio is much smaller than its output advantage. This reflects the fact that significant numbers of Braidy employees will be commuting to Ashland from Ohio. Only 52 percent of the non-Kentucky jobs impact of Braidy will occur in West Virginia, while 48 percent will be in Ohio.
- The value of Braidy's combined economic impact on output in Ohio and West Virginia is about one-sixth of the size of the value of its economic impact on output in Eastern Kentucky.
- Braidy's employment impact in Ohio and West Virginia, however, is about onethird of the size of that for Eastern Kentucky. Once again, this reflects where Braidy workers reside.

Table 1
Summary of the Major Economic Impacts of Braidy Industries in Ohio and West Virginia

	Output	Earnings	Employment
<u>Ohio</u>			
Lawrence County			
Construction	\$61,619,266	\$78,628,233	1,375
Annual Operation	\$26,090,833	\$28,626,908	506
Total	\$87,710,099	\$107,275,141	1,881
Scioto County			
Construction	\$50,102,566	\$75,892,099	1,617

Annual Operation	\$15,139,600	\$21,902,467	447
Total	\$65,242,166	\$97,794,566	2,064
Ohio Total		1	
Construction	\$111,721,832	\$154,320,332	2,992
Annual Operation	\$41,230,433	\$50,529,375	953
Total	\$152,952,265	\$205,069,707	3,945
West Virginia			
Cabell County			
Construction	\$100,008,266	\$88,688,432	2,082
Annual Operation	\$79,425,260	\$37,810,574	842
Total	\$179,433,526	\$126,499,006	2,924
Wayne County			
Construction	\$43,113,800	\$49,315,099	1,079
Annual Operation	\$15,792,831	\$9,491,069	214
Total	\$58,906,631	\$58,806,168	1,293
West Virginia Total	<u>.</u>		
Construction	\$143,122,066	\$138,003,531	3,161
Annual Operation	\$95,218,091	\$47,301,643	1,056
Total	\$238,340,157	\$185,305,174	4,217

## A Closer Look at Employment Effects

Table 2 focuses more intently upon the employment effects of Braidy's operations. These numbers are stated in terms of "job years," where one job year is one person working for one year. In the case of annual operations, this is a one-year estimate. Construction, however, is spread over several years and a single person might work two or more job years during that process.

The employment effects of construction are roughly three times as large as those connected to annual operations.

It is clear that Braidy's activities will make a significant employment difference in these four counties. Almost one in very six jobs in Wayne County, West Virginia will directly or indirectly have owed its existence to Braidy, while in Lawrence County, Ohio, it will be approximately one of every seven jobs. Simply put, Braidy is a big economic deal in these counties, especially during the construction process.

<u>Table 2</u>

Additional Job Years Created by Braidy Industries' Activities in Ohio and West Virginia

Location	Construction	Annual Operations	Total Job Years	Percent of Current of
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				Two-County Employment
West Virginia	3,161	1,056	4,217	7.87%
Cabell County	2,082	842	2,924	6.23%
Wayne County	1,079	214	1,293	19.45%
Ohio	2,992	953	3,945	13,28%
Lawrence County	1,375	506	1,881	17.86%
Scioto County	1,617	447	2,064	10.78%
Two-State Totals	6,153	2,009	8,162	9.80%

## **SUMMARY**

Only a cursory look at the demographic and economic trends presented in the first section is needed to realize that the advent of Braidy Industries in Eastern Kentucky likely is the most important positive economic development in the region for the past half-century. Whether the measure is the value of the output Braidy produces (or stimulates), or the earnings of its employees (and the ripple effects of their expenditures), or the number of jobs supported directly or indirectly by Braidy, it is fair to say that Braidy is an extremely important development for the region.

This study allows us to say how much more about how big of a deal Braidy is for neighboring Ohio and West Virginia. Braidy's total job impact on Ohio and West Virginia will be about one-third of the size of its impact on Eastern Kentucky. These are jobs in addition to those already estimated for Eastern Kentucky.

Braidy's economic ripples, then, do not stop at the Ohio River or at state borders. Even though Ohio and West Virginia have not directly contributed to Braidy's development, they nonetheless are reaping significant slices of the benefits.